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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/801,060      | 03/08/2001  | Woo-kyeong Park      | Q62787              | 4275             |

7590                  07/12/2004

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WASHINGTON, DC 20037-3213

EXAMINER

PHUNKULH, BOB A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2661     | 8            |

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/801,060             | PARK, WOO-KYEONG    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Bob A. Phunkulh        | 2661                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 08 March 2001.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-19 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-19 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 08 March 2001 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Schulte (XP-000875170).

Regarding claim 1, Schulte discloses (see figures 1-5) a method for providing a wireless application protocol service for wireless Internet, in which a content server on the Internet performs data processing at a wireless datagram protocol layer, the method comprising the steps of:

(a) at the content server, receiving a user request message for a wireless Internet service from a wireless application protocol terminal connected to a mobile communications network, the request message being based on a wireless application protocol;

(b) at the content server, processing the request message received in the step (a) according to the wireless application protocol;

(c) at the content server, constructing a response message in accordance with the wireless application protocol, to reply to the user request message; and

(d) sending the response message, from the content server, to the wireless application protocol terminal; wherein a relay, providing a communications channel between the mobile communications network and the Internet, relays the request message transmitted in the step (a) and the response message transmitted in the step (d) at a layer always below the wireless datagram protocol layer, the request message being transferred to the content server, and the response message being transferred to the wireless application protocol terminal.

Regarding claim 2, Schulte discloses (see figures 1-5) the relay intermediates between the content server and the wireless application protocol terminal, at an Internet protocol layer lower than the wireless datagram protocol layer.

Regarding claim 3, Schulte discloses (see figures 1-5) the wireless application protocol terminal is a mobile communications terminal complying with one of a code

division multiple access (CDMA) mode, a global system for mobile communication (GSM) mode, and an IMT2000 mode.

Regarding claim 4, Schulte discloses (see figures 1-5) the content server provides a push service of transmitting information to the user one-way based on the wireless application protocol.

Regarding claim 5, Schulte discloses (see figures 1-5) a method for providing a wireless application protocol service for wireless Internet, in which a relay providing a communications channel between a mobile communications network and the Internet performs data processing at a layer only below a wireless datagram protocol layer during communications between a wireless application protocol terminal connected to the mobile communications network and a content server on the Internet, and the content server on Internet performs data processing at the wireless datagram protocol layer, the method comprising the steps of:

- (a) at the wireless application protocol terminal, transmitting a request message for a wireless Internet service in accordance with a wireless communications protocol, in response to a user input;
- (b) at the relay, relaying the request message transmitted in the step (a) to the content server, the relay performing data processing of the request message at a layer only below the wireless datagram protocol layer;

- (c) at the content server, receiving the request message transferred in the step
- (b) and processing the request message in accordance with the wireless application protocol, the processing of the request message including processing at the wireless datagram protocol layer;
- (d) at the content server, constructing a response message in accordance with the wireless application protocol, in reply to the request message, and transmitting the response message;
- (e) at the relay, relaying the response message transmitted in the step (d) at the layer only below the wireless datagram protocol layer so as to transfer the response message to the wireless application protocol terminal; and
- (f) at the wireless application protocol terminal, outputting the contents of the response message transferred in the step (e).

Regarding claim 6, Schulte discloses (see figures 1-5) a method for providing a wireless application protocol service for wireless Internet, in which a wireless application protocol server on the Internet performs data processing at a wireless datagram protocol layer, the method comprising the steps of:

- (a) at the wireless application protocol server, receiving a user request message for a wireless Internet service from a wireless application protocol terminal connected to a mobile communications network, the request message being based on a wireless application protocol;

(b) converting the request message received in the step (a) into a web service request message used over the Internet;

(c) transmitting the web service request message to a web server on the Internet and receiving a web service response message corresponding to the request message;

(d) converting the web service response message received in the step (c) into a response message based on the wireless application protocol; and

(e) transmitting the response message based on the wireless application protocol to the wireless application protocol terminal, wherein a relay providing a communication channel between the mobile communication network and the Internet relays the request message transmitted in the step (a) and the response message transmitted in the step (e), said relaying being performed with data processing of said messages at a layer only below the wireless datagram protocol layer, the request message being transferred to the wireless application protocol server, and the response message being transferred to the wireless application protocol terminal.

Regarding claim 7, Schulte discloses (see figures 1-5) in the steps (b) and (d), protocol conversion is performed between a communications protocol for the wireless Internet service and a communications protocol for a web service through the Internet.

Regarding claim 8, Schulte discloses (see figures 1-5) in the step (d), protocol conversion is performed between a communications protocol for the wireless Internet service and a communications protocol for a web service through the Internet, and

wherein document format conversion is performed between a document format for the wireless Internet service and a document format for a web service through the Internet.

Regarding claim 9, Schulte discloses (see figures 1-5) the relay intermediates between the wireless application protocol server and the wireless application protocol terminal, at an Internet protocol layer below the wireless datagram protocol layer.

Regarding claim 10, Schulte discloses (see figures 1-5) the wireless application protocol terminal is a mobile communications terminal complying with one of a code division multiple access (CDMA) mode, a global system for mobile communication (GSM) mode, and an IMT2000 mode.

Regarding claim 11, Schulte discloses (see figures 1-5) a method for providing a wireless application protocol service for wireless Internet, in which a relay, providing a communications channel between a mobile communications network and the Internet, performs data processing at a layer only below a wireless datagram protocol layer during communications between a wireless application protocol terminal connected to the mobile communications network and a wireless application protocol server on the Internet, the wireless application protocol server on the Internet performing data processing at the wireless datagram protocol layer, said method comprising:

- (a) at the wireless application protocol terminal, transmitting a request message for a wireless Internet service according to a wireless communications protocol, in response to an input by a user;
- (b) at the relay, relaying the request message transmitted in the step (a) at the layer below the wireless datagram protocol layer so that the request message is transferred to the wireless application protocol server;
- (c) at the wireless application protocol server, receiving and converting the request message transferred in the step (b) into a web service request message according to a protocol used over the Internet;
- (d) transmitting the web service request message to a web server on the Internet and receiving a web service response message corresponding to the request message;
- (e) at the wireless application protocol server, converting the web service response message received in the step (d) into a response message based on the wireless application protocol and transmitting it to the wireless application protocol terminal;
- (f) at the relay, relaying the response message transmitted in the step (e) at the layer below the wireless datagram protocol layer to transfer the response message to the wireless application protocol terminal; and
- (g) at the wireless application protocol terminal, outputting the contents of the response message transmitted in the step (f).

Regarding claim 12, Schulte discloses (see figures 1-5) a method for providing a wireless application protocol service for wireless Internet, in which a content server providing a web service on the Internet performs data processing at a wireless datagram protocol layer, the method comprising the steps of:

- (a) at the content server, receiving a user request message for a wireless Internet service from a wireless application protocol terminal connected to a mobile communications network, the request message being based on a wireless application protocol;
- (b) at the content server, converting a document format for the web service through the Internet into a document format for the wireless Internet service in order to provide a response to the user request message;
- (c) constructing a response message based on the wireless application protocol, using the response, converted into the document format for the wireless Internet service in the step (b); and
- (d) transmitting the converted response to the wireless application protocol terminal; wherein a relay providing a communications channel between the mobile communications network and the Internet relays the request message transmitted in the step (a) and the response message transmitted in the step (d) at a layer only below the wireless datagram protocol layer such that the request message is transferred to the content server, and the response message is transferred to the wireless application protocol terminal.

Regarding claim 13, Schulte discloses (see figures 1-5) the relay intermediates between the content server and the wireless application protocol terminal, at an Internet protocol layer.

Regarding claim 14, Schulte discloses (see figures 1-5) the wireless application protocol terminal is a mobile communications terminal complying with one of a code division multiple access (CDMA) mode, a global system for mobile communication (GSM) mode, and an IMT2000 mode.

Regarding claim 15, Schulte discloses (see figures 1-5) the wireless application protocol service provided by the content server together with the web service through the Internet is supported by a software module installed separately from a software module for the web service.

Regarding claim 16, Schulte discloses (see figures 1-5) a method for providing a wireless application protocol service for wireless Internet, in which a relay providing a communications channel between a mobile communications network and the Internet only performs data processing at a layer only below a wireless datagram protocol layer during communications between a wireless application protocol terminal connected to the mobile communications network and a content server providing a web service through the Internet, and the content server on the Internet performs data processing at the wireless datagram protocol layer, the method comprising the steps of:

- (a) at the wireless application protocol terminal, constructing and transmitting a request message for a wireless Internet service based on a wireless communications protocol, in response to an input by a user;
- (b) at the relay, relaying the request message transmitted in the step (a) at the layer only below the wireless datagram protocol layer so that the request message is transferred to the content server;
- (c) at the content server, receiving the request message transferred in the step (b);
- (d) at the content server, converting a document format for the web service through the Internet into a document format for the wireless Internet service in order to provide a response to the user request message;
- (e) constructing a response message based on the wireless application protocol, using the response converted into the document format for the wireless Internet service in the step (d), and transmitting the constructed response message;
- (f) at the relay, relaying the response message transmitted in the step (e) at the layer only below the wireless datagram protocol layer so that the response message is transferred to the wireless application protocol terminal; and
- (g) at the wireless application protocol terminal, outputting the contents of the response message transmitted in the step (f).

Regarding claim 17, Schulte discloses (see figures 1-5) a system for providing a wireless application protocol service, the system comprising:

a service terminal supporting a wireless application protocol, and connected to a mobile communications network;

a relay providing a communications channel between the mobile communications network and the Internet; and

a content server for providing a content service for wireless Internet, the content server being connected to the Internet,

wherein the relay intermediates between the service terminal and the content server only at one or more layers below a wireless datagram protocol layer, and the content server performs data processing including the wireless datagram protocol layer, thereby providing the wireless application protocol service for the service terminal.

Regarding claim 18, Schulte discloses (see figures 1-5) a system for providing a wireless application protocol service, the system comprising:

a service terminal supporting a wireless application protocol and connected to a mobile communications network;

a relay providing a communications channel between the mobile communications network and the Internet;

a content server providing content through a web service over the Internet, the content server being connected to the Internet; and

a wireless application protocol server intermediately between the service terminal and the content server, the wireless application protocol server being connected to the Internet,

wherein:

the relay intermediates between the service terminal and the wireless application protocol server only at one or more layers below a wireless datagram protocol layer,

the wireless application protocol server performs data processing including the wireless datagram protocol layer or higher layers,

the wireless application protocol server converts a service request into a web service request used over the Internet and transmits the service request to the content server when receiving the service request based on a wireless application protocol from the service terminal via the relay, and

the wireless application protocol server converts a web service response into a response based on the wireless application protocol, and transmits the converted response to the service terminal via the relay when receiving the web service response from the content server.

Regarding claim 19, Schulte discloses a system for providing a wireless application protocol service, the system comprising:

a service terminal supporting a wireless application protocol and connected to a mobile communications network;

a relay providing a communications channel between the mobile communications network and the Internet; and

a content server providing content through a web service over the Internet and providing a content service for wireless Internet,  
the content server being connected to the Internet, wherein:  
the relay intermediates between the service terminal and the content server at a layer only below a wireless datagram protocol layer,  
the content server performs data processing at the wireless datagram protocol layer or higher layers, and the content server has a function of converting a document format for the web service into a document format for a wireless Internet service in order to provide the wireless application protocol service for the wireless Internet to the service terminal.

***Conclusion***

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for formal communications intended for entry)

**Or:**

Hand-delivered responses should be brought to Crystal Park II, 2021  
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is (703) 308-8251. The examiner can normally be reached on Monday-Friday from 8:00 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Douglas W. Olms**, can be reached on (703) 305-4703. The fax phone number for this group is (703) 872-9314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Bob A. Phunkulh**

Bob A. Phu

TC 2600  
Art Unit 2661  
July 7, 2004